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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/961,432	09/25/2001	Akira Sugimoto	Q66268	8293
7590 06/16/2004				
SUGHRUE, MION, ZINN MACPEAK & SEAS, PLLC 2100 Pennsylvania Avenue, NW Washington, DC 20037-3213			EXAMINER HODGES, MATTHEW P	
			ART UNIT 2879	PAPER NUMBER

DATE MAILED: 06/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/961,432

Applicant(s)

SUGIMOTO ET AL.

Examiner

Matt P Hodges

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 22 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-13 is/are pending in the application.
- 4a) Of the above claim(s) 1 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-5, 7-10 and 12 is/are rejected.
- 7) ☒ Claim(s) 6, 11 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

The Amendment, filed on 1/22/2004, has been entered and acknowledged by the Examiner.

Cancellation of claim 1 has been entered.

Claim Objections

Claim 10 is objected to because of the following informalities:

Claim 10 line 6 includes the words "at least one surfaces" which appears to be a typographical error and should read "at least one surface".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims are rejected under 35 U.S.C. 102(e) as being anticipated by Komatsu et al. (US 6,660,409).

Regarding claim 10, Harvey discloses (see figure 5) an organic EL display including an Organic EL element including: an anode layer (2), a light emitting layer (5), and a cathode layer

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(6). (Column 10 lines 38-46). The display further includes a plastic substrate which covers at least one surface of the substrate. (Column 5 lines 20-26). The barrier film is an inorganic film of Silicon nitride oxide. (Column 10 lines 50-60).

Regarding claim 12, Harvey further discloses the inorganic film covering opposing sides of the substrate on either side of the organic EL elements. (See figure 5).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-5 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harvey III et al. (5,757,126) in view of Yamazaki (US 6,432,561).

Regarding claims 2-5, Harvey discloses (see figures 9 and 1) an organic EL display including an array of Organic EL elements (12) including: an anode layer (13), a light emitting layer (16), and a cathode layer (15). (Column 4 lines 8-20). The display further includes a plastic substrate (11) with all surfaces of the substrate covered by a barrier film (16). (Column 5 lines 19-26). The barrier film is an inorganic film. (Column 5 lines 5-13). Harvey does not appear to specify the use of silicon nitride oxide as the inorganic barrier film composition. However Yamazaki, in the same field of endeavor, discloses the use of silicon nitride oxide in passivation films to advantageously protect the device from moisture and oxygen. (Column 4 lines 35-41). Providing a barrier against moisture and oxygen allows for a longer device life.

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Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to incorporate the use of silicon nitride oxide as the inorganic barrier film composition into the display as disclosed by Harvey in order to advantageously provide a longer device life.

Regarding claim 8, Harvey further discloses (see figure 11) a sealing film (52) that covers the rear sides of the organic EL elements. (Column 6 lines 60-61).

Regarding claim 7, the Examiner notes that the claim limitation that "said inorganic barrier film is deposited by sputtering" is drawn to a process of manufacturing which is incidental to the claimed apparatus. It is well established that a claimed apparatus cannot be distinguished over the prior art by a process limitation. Consequently, absent a showing of an unobvious difference between the claimed product and the prior art, the subject product-by-process claim limitation is not afforded patentable weight (see MPEP 2113). Therefore, it is the position of the examiner that it would have been obvious to one of ordinary skill in the art that the display disclosed by Harvey in view of Yamazaki is at least a fully functional equivalent to the Applicant's claimed display as evidenced by the rejection of claim one's suggestion of all of the Applicant's claimed structural limitations.

Regarding claim 9, Harvey in view of Yamazaki discloses the display as described (see rejection of claim 1 above) Harvey further discloses (see figure 11) an additional inorganic barrier film (60) surrounding the organic EL elements. (Column 6 lines 55-59). Harvey in view of Yamazaki does not appear to specify the two inorganic barrier films being the same film. However making the films integral allows for easier manufacture and thus lowers cost. Thus, it would have been obvious at the time the invention was made to a person having ordinary skills

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in the art to incorporate specify the two inorganic barrier films being the same film into the device as disclosed by Harvey in view of Yamazaki in order to advantageously reduce cost and increase ease of manufacture.

Allowable Subject Matter

Claims 6, 11 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 6, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claim 6, and specifically comprising the limitation of an organic EL display including an Organic EL element including: an anode layer, a light emitting layer, and a cathode layer. The display further includes a resin substrate with all surfaces of the substrate covered by a barrier film where the barrier film is an inorganic film of silicon nitride oxide in a ratio of nitrogen to oxygen from 0.13 to 2.88.

Regarding claim 11, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claim 11, and specifically comprising the limitation of an organic EL display including an Organic EL element including: an anode layer, a light emitting layer, and a cathode layer. The display further includes a resin substrate with at least one surface of the substrate covered by a barrier film where the barrier film is an inorganic film of silicon nitride oxide in a ratio of nitrogen to oxygen from 0.13 to 2.88.

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Regarding claim 13, claim 13 is allowable for the reasons given in claim 11 because of its dependency status from claim 11.

Response to Arguments

Applicant's arguments filed 1/22/2004 have been fully considered but they are not persuasive.

Regarding applicants claim that the combination of Harvey in view of Yamazaki is improper as Harvey refers to a top emitting device and Yamazaki refers to a bottom emitting device examiner respectfully disagrees. With regard to the sealing of the substrate from damage to moisture and the elements both top and bottom emitting devices are equally effected and thus the use of a substance that advantageously prevents moisture damage is welcome. Thus in the case the direction of light emittance is not a limitation to the combination as made.

Regarding applicants claim that Yamazaki teaches a film that contains almost no oxygen and thus does not teach the Silicon nitride oxide film claimed, examiner respectfully disagrees. In this case though the amount of oxygen may be minimized it is still present in the film taught by Yamazaki and thus meets the limitations in the claims cited.

Regarding applicants claim that Yamazaki teaches away from the use of the ranges cited in claim 6 and new claim 11, examiner agrees. The rejection of claim 6 has been withdrawn.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matt P Hodges whose telephone number is (571) 272-2454. The examiner can normally be reached on 7:30 AM to 4:00 PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7382 for regular communications and (703) 308-7382 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

mph



NIMESHKUMAR D. PATEL
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800